

Application No. 10/600,588
Response to office action dated June 15, 2006

AMENDMENTS TO THE CLAIMS

This listing of claims will replace, without prejudice, all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A titanium copper alloy having excellent strength and bendability comprising 1.0 to 4.5% by mass of Ti, the balance of copper and inevitable impurities, wherein:

the diameter of intermetallic compound particles consisting of Cu and Ti precipitated in the alloy is 3 μm or less;

the average number of said intermetallic compound particles having a diameter of 0.2 to 3 μm is 700 or less per a cross-sectional area of 1000 μm^2 in a direction transverse to a rolling direction;

the average grain size measured in a cross-sectional area in a direction transverse to a rolling direction is ~~10~~ 8 μm or less; and

the alloy tensile strength is 890 MPa or more.

2. (previously presented) The titanium copper alloy according to claim 1, wherein the average number of the intermetallic compound particles having a diameter of 0.2 to 3 μm is 6 to 700 per a cross-sectional area of 1000 μm^2 in a direction transverse to a rolling direction.

3. (cancelled)

4. (previously presented) The manufacturing method according to claim 7, wherein the reduction ratio in the cold rolling between the solution treatment and the aging treatment is 50% or less.

5. (previously presented) The manufacturing method according to claim 7, wherein the aging treatment is conducted at a temperature of 300 to 600°C.

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6. (previously presented) The manufacturing method according to claim 4, wherein the aging treatment is conducted at a temperature of 300 to 600 °C.

7. (previously presented) A method of manufacturing the titanium copper alloy according to claim 1 or 2 comprising, in the following order:

heating a titanium copper alloy ingot at a temperature of 850 to ~~950~~950 °C for 30 minutes or more;

hot rolling the ingot, whereby the temperature at the end of the hot rolling is ~~700~~700 °C or more;

cold rolling the ingot;

conducting a solution treatment comprising annealing the ingot at a temperature in the range between (T-50)°C and (T+10)°C, and thereafter cooling the annealed material at a cooling rate of 100 °C/sec or more, wherein T is a temperature at which the solubility of Ti in Cu is equal to the concentration of Ti contained in the alloy;

cold rolling the alloy; and

conducting an aging treatment of the alloy.